

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-15 are presently active in this case, Claims 1 and 8 having been amended by way of the present Amendment.

In the outstanding Official Action, Claims 1-4, 6, and 8-14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Selbrede (U.S. Patent No. 5,383,971) in view of Carman et al. (U.S. Patent No. 5,294,778). Claims 5 and 15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Selbrede in view of Carman et al. And further in view of Bunkofske (U.S. Patent No. 5,705,223). Claim 7 was rejected under 35 U.S.C. 103(a) as being unpatentable over Selbrede in view of Carman et al. and further in view of Anderson et al. (U.S. Patent No. 5,551,982). For the reasons discussed below, the Applicants request the withdrawal of the obviousness rejections.

The basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP 2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the reference (or references when combined) must teach or suggest all of the claim limitations. The Applicant submits that a *prima facie* case of obviousness has not been established in the present case because the references, either taken singularly or in combination, do not teach or suggest all of the claim limitations. For example, the cited references do not disclose or suggest a film deposition apparatus comprising a second heating apparatus formed separately from a clamp and arranged opposite the clamp, for heating the clamp, as expressly recited in Claim 1 of the present application.

Therefore, the cited references also do not disclose or suggest a gas flow path formed between the clamp and the second heating apparatus when the clamp is moved to a position where the clamp clamps the target object, as recited in Claim 1.

The Official Action notes that the Selbrede reference fails to disclose a second heating apparatus formed separately from the clamp with a gas flow path formed between the two structures. The Official Action cites the Carman et al. reference for the teaching of edge loss heaters (depicted in Figure 3 as identified by reference numerals 14 and 16) in locations proximate a platen (52). The heaters of the Carman et al. reference have been considered as a means for maintaining a desired heat profile, however, the Applicants note that the heaters of the Carman et al. reference are designed to only heat the platen (52). In fact, the Carman et al. reference does not touch upon a clamping technique, and therefore does not describe a structure configured to heat a clamp. Accordingly, the Carman et al. reference clearly does not teach or suggest a second heating apparatus formed separately from a clamp and arranged opposite the clamp, for heating the clamp, as expressly recited in Claim 1 of the present application.

Furthermore, the cited references do not disclose or suggest a gas flow path formed between the clamp and the second heating apparatus when the clamp is moved to a position where the clamp clamps the target object, as recited in Claim 1. Firstly, the Applicants submit that the Selbrede and Carman et al. references do not disclose this configuration, since they do not disclose the second heating apparatus, and therefore the necessarily do not disclose a flow path between a clamp and the second heating apparatus. Secondly, the heaters (14 and 16) cited in the Carman et al. reference are directly flush with a rear surface of the platen (52), and do not provide a configuration that could allow for a gas flow path as recited in Claim 1 of the present application.

The present invention advantageously recites a second heating apparatus arranged opposite the clamp for heating the clamp. By way of illustration and not limitation, an embodiment of a second heating apparatus (148) is depicted and described in the specification of the present application. Neither the Selbrede reference nor the Carman et al. reference discloses or suggests deliberately heating the clamp by use of such a second heating member arranged opposite the clamp, which advantageously prevents the clamp from cooling the edge portion of a clamped object. The Applicants, therefore, respectfully submit that the rejection is based on the improper application of hindsight considerations. It is well settled that it is impermissible simply to engage in hindsight reconstruction of the claimed invention, using Applicants' structure as a template and selecting elements from the references to fill in the gaps. *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991). Recognizing, after the fact, that a modification of the prior art would provide an improvement or advantage, without suggestion thereof by the prior art, rather than dictating a conclusion of obviousness, is an indication of improper application of hindsight considerations. Simplicity and hindsight are not proper criteria for resolving obviousness. *In re Warner*, 397 F.2d 1011, 154 USPQ 173 (CCPA 1967).

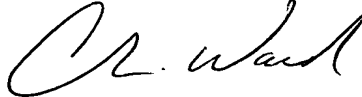
Accordingly, the Applicant respectfully requests the withdrawal of the obviousness rejections.

Claims 2-15 are considered allowable for the reasons advanced for Claim 1 from which they depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed, taught, nor suggested by the applied references when those features are considered within the context of Claim 1.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

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IN THE CLAIMS

1. (Once Amended) A film deposition apparatus comprising:
 - a container forming a processing chamber for processing a target object;
 - a mounting table which is provided in the processing chamber and on which the target object is mounted;
 - a first heating apparatus provided in the mounting table, for heating the target object mounted on the mounting table;
 - a first gas supply section provided in the container, for supplying processing gas into the processing chamber, the processing gas forming [a high-melting-point metal-film layer] thin film on the target object mounted on the mounting table;
 - a movable clamp for clamping an edge portion of the target object and holding the target object on the mounting table;
 - a second heating apparatus formed separately from the clamp[, for heating the clamp indirectly] and arranged opposite the clamp, for heating the clamp;
 - a gas flow path formed between the clamp and the second heating apparatus when the clamp is moved to a position where the clamp clamps the target object; and
 - a second gas supply section for causing backside gas to flow into the gas flow path.

8. (Once Amended) The film deposition apparatus according to claim 1, wherein [the high-melting-point metal-film layer is formed of one of titanium and a titanium alloy] ~~the thin film is formed of a high-melting-point metal film layer.~~